www.MindMachines.com 2006 Edition

Light and Sound Buyers Guide

By Michael Landgraf

"The Complete Guide to Light and Sound instruments"

$4.95

The prices appearing in this "Light & Sound Buyer's Guide" are the manufacturer's suggested retail prices. Mindmachines.com and our affiliated websites offer the majority of these products below the Manufacturer's Suggested Retail Price.

<u>Warning & Disclaimer</u>: Light and sound instruments generate pulsed light. People who are photosensitive, epileptic or photoepileptic, whether knowingly or not, should not use pulsed light stimulation without the consent of their physician. Persons with a history of brain seizures, mental disorders or alcohol and/or drug abuse also should not use light and sound instrumentation unless under the supervision of their medical doctor. Light and sound instruments are not recognized as a treatment or cure of any medical condition or disability. Michael Landgraf and Michael Landgraf Enterprises LLC are not responsible, financially or otherwise, for your use of light and sound instrumentation.

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Cover design: Created entirely by Christopher Oliver. Mr. Oliver is known in the Light & Sound community for his talent in designing light / sound sessions and musical compositions . Christopher's latest work, the AV3X, is the first DVD to deliver light and sound stimulation totally synchronized with music and visuals. Mr. Oliver can be contacted at: (469) 644-6447 or visit: www.Mindmachines.com.

Introduction

Thank you for downloading the 2006 Edition of the “Light & Sound Buyer’s Guide”. I hope this guide helps you determine which light and sound instrument bests meets your specific needs.

There are dozens of light and sound manufacturers around the world. They all create basically the same thing: a little case with lightframes and headphones, designed to entrain your mind into targeted states of consciousness. Deciding which model best suits your purpose can be confusing and time-consuming, especially when they all tout their particular products as the best and provide you with a myriad of reasons why.

In order to make your decision as to which light and sound instrument best meets your needs, I have chosen ten models based on the positive feedback from my clients who have purchased from Mindmachines.com. I have not approached the manufacturers and said I’d like to showcase their units, rather, if you want manufacturer’s rhetoric all you need do is visit their website and you’ll receive plenty of hype. Reading this Buyer’s Guide will instead offer you the opinions of those who have actually used these instruments and why they’ve chosen them.

This is the fourth buyers guide produced. The first three were offered for sale because they contained valuable information that could help you make a wise choice. And I suppose the sellers figured they could make a few bucks in doing so. This edition is free, just like the AVS Journals we publish, because it is more important to us that you receive the information you need to base your decision on facts rather than rhetoric, that these facts are based on the most up to date information available, and by supplying you with the most recent information available regarding the best light and sound units on the market—free of charge—that you of course consider us when deciding to purchase your light and sound unit.

Based on my fifteen years of selling light and sound instruments, and listening to my customers tell me what they like and dislike about the units they purchased, I would now like to present you with what I believe are the ten best light and sound units available on the market.

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Table of Contents

Introduction 3

What Is A Light & Sound Instrument? 5

Chart One 7

Chart Two 8

Chart Three 9

Sirius 10

Proteus 11

Zen Master 13

PAL 14

PR-2X 16

XCELR8R II 17

SportsLink Focus Trainer 18

MindsEye 19

Paradise XL / Travel Model 21

Paradise XL+ / Travel Model 24

What Type Of System Do You Need? 27

Lightframes: What Color Should You Choose? 27

Headphones: What to Expect 32

Making a Decision 33

Your Light & Sound Instrument Has Arrived, Now What? 34

References & Suggested Reading List 36

About the Author 43

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“What Is A Light & Sound Instrument?”

(Excerpt taken from “Mind States 2 / An Introduction to Light & Sound Technology”)

A light and sound instrument is a mind entrainment tool. The method by which this entrainment occurs is known as the Frequency Following Response (FFR). Through the use of audio and visual stimulation, listeners are gently guided into specific states of mind. Each audio beat and light pulse is a specific frequency. Our minds "think" in terms of frequency. Brainwaves change frequencies based on neural activity within the brain, be it by hearing, touch, smell, vision and/or taste. These senses respond to activity from the environment and transmits that information to the brain via electrical signals. Hearing and vision are considered favorable senses for affecting brainwaves safely. By presenting these beats and pulses to the brain, within a few minutes, the brain begins to mimic or follow the same frequencies as the stimuli (the beats and pulses). This process is referred to as entrainment. In essence, these instruments speak to the mind in it's own language- the language of frequency.

The Frequency Following Response that the mind experiences through light and sound stimulation provides a focus for the brain. This focus safely quells any internal dialogue or "brain chatter", and enables the listener to reach more quickly and effectively the optimum state of mind targeted for the task at hand (i.e. energizing, learning, relaxing, etc.).

Humanity has been aware of how outside stimulation can affect the mind long before recorded history. We can share that same awareness by sitting around a campfire. Watching the flickering flames creates a soothing, calming sensation within the mind. This same affect is also experienced with rhythmic drumbeats. The continuous, repetitive beats tend to have a calming affect, while faster repetitions create a more energetic sensation. Within the twentieth century, researchers have developed this awareness into highly beneficial instrumentation.

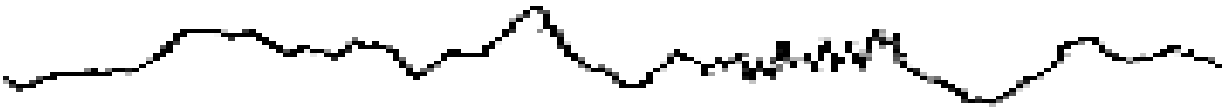
Brainwaves are the electrical wave patterns generated in every person's brain. These waves vary according to level of consciousness, sub-consciousness and unconsciousness and are characterized by four distinct types of brainwaves. Each of these electrical wave patterns have distinctly different ways of perceiving, processing, learning and knowing information (Hoiberg 1989). All of these brain waves are produced at all times. However, a predominance of a specific desired brainwave state can be created at will, which allows a person to potentialize his or her capabilities towards achieving human excellence.

Brainwave frequencies are described in terms of hertz (Hz), or cycles per second, which are measured by an electroencephalogram (EEG). The four general categories of brainwave frequencies and their main characteristics are:

Beta Brainwaves

Alpha Brainwaves

Theta Brainwaves



Delta Brainwaves

Beta brainwaves are the highest frequency pattern, ranging from thirteen hertz and above, and can be separated into three sub-categories. The first is high beta, ranging from nineteen hertz and above. When high beta is the dominant brainwave state, anxiety and stress are most likely to occur. The second sub-category is mid beta, with frequencies ranging from fifteen to eighteen hertz. Mid beta is characterized by action, with focus on external surroundings. The third is SMR beta (Sensorimotor Rhythm), ranging from thirteen to fifteen hertz. While in this state, focus is also on external surroundings, but the individual is more relaxed than in mid beta. Generally speaking, beta brainwaves are characterized by logical, analytical and intellectual thinking, verbal communication and awareness of surroundings. **Alpha** brainwaves are a frequency pattern ranging from eight to twelve hertz. They most commonly occur when we are calm and relaxed, yet mentally alert. These brainwaves are also present during daydreaming. **Theta** brainwaves range from four to seven hertz, characterized by being deeply relaxed and inwardly focused. This brainwave state is also associated with rapid learning and the assimilation of new information with high retention, heightened motivation to activate goals, bursts of creativity, insight and new behavior patterns. **Delta** brainwaves range from five-tenths to three hertz and are associated with being extremely relaxed, characterized by sleep.

Researchers have proven that brainwave frequencies determine what brainwave state is being experienced at any given time (Budzynski 1991). By measuring the production of brainwaves through the utilization of EEG (electroencephalogram) equipment, the frequencies that produce these various brain states can be tracked on a computer monitor. As mentioned earlier, these frequencies are generated in every person's brain, and are the result of outside stimulation that has been passed to the brain via electrical signals from our different senses. Light and sound instruments stimulate the neural activity of our vision and hearing, and can safely guide our minds to produce specific frequencies that are associated with the four general brainwave categories (Hutchison 1992).

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CHART ONE: OVERVIEW OF TEN MOST POPULAR LIGHT & SOUND INSTRUMENTS

Light & Sound Instrument	Price (MSRP)	Number of Built-in Sessions	Frequency Range	Power Source	Ability to Adjust Session Time	Beat Frequencies
Sirius	$149.95	23	0.1 to 40Hz	3 AA batteries (adapter included)	No	No
Proteus	$229.95	50	0.2 to 50Hz	3 AA batteries (adapter included)	No	Yes
Zen Master	$229.95	50	0.5 to 40Hz	2 AA batteries (adapter optional)	Yes	Yes
PAL	$240.00	18	0.5 to 20Hz	9 volt battery	Yes	Yes
PR-2X	$269.95	50	1 to 40Hz	Built-in rechargeable battery (adapter included)	Yes	Yes
XCELR8R	$349.95	50	1 to 40Hz	Built-in rechargeable battery (adapter included)	Yes	Yes
Sportslink Focus Trainer	$349.95	15	0.5 to 30Hz	3 AAA batteries	Yes	Yes
MindsEye	$349.95	50	1 to 25Hz	Built-in batteries & AC Adapter	Yes	Yes
Paradise XL (Travel Model)	$495.00	35	1 to 25Hz	AC Adapter	Yes	Yes
Paradise XL+ (Travel Model)	$630.00	35	1 to 25Hz	AC Adapter	Yes	Yes

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CHART TWO: OVERVIEW OF TEN MOST POPULAR LIGHT & SOUND INSTRUMENTS

Light & Sound Instrument	Ability to Create Customized Sessions	AudioStobe Compatible	Lightframes included in Standard System	Owner's Manual	Manual Mode Operation
Sirius	No	Yes	White LED	Very Good	Yes
Proteus	Yes	Yes	Emerald & Ruby LED Combination	Very Good	Yes
ZenMaster	Yes	Yes	White LED	Excellent	Yes
PAL	Yes	No	Omniscreen	Very Good	Yes
PR-2X	Yes	Yes	TENcolor RGB LEDchip	Excellent	Yes
XCELR8R	Yes	Yes	TENcolor RGB LEDchip	Excellent	Yes
Sportslink Focus Trainer	No	Yes	White LED	Excellent	Yes
MindsEye	Yes	Yes	Red LED	Very Good	Yes
Paradise XL (Travel Model)	Yes	No	Omniscreen	Very Good	Yes
Paradise XL+ (Travel Model)	Yes	No	Omniscreen	Very Good	Yes

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CHART THREE: OVERVIEW OF UNIQUE FEATURES

Sirius: Excellent price, extremely easy to use, AudioStobe compatible with ColorPulse and MicroPulse. Standard system includes white LED lightframes and carrying case.

Proteus: Generates a colorful light show with red/green glasses, upgradeable software incorporates waveform design (sine, square, triangle, sawtooth) and includes large memory for designing your own sessions.

Zen Master: 50 highly entraining light and sound sessions built in to a high quality CD player. Truly unique and easy to set up. Standard system includes white LED lightframes with excellent headphones. And when purchasing through Mindmachines.com includes the special "Ultimate Zen Master Owner's Guide" on CD

PAL: This light and sound machine is a little known gem stocked full of features no other manufacturer has thought to incorporate. It is a little harder to understand how to use - at first - but after a little experimenting while reading (what has got to be the most comprehensive) owners manual, you will be able to access the complete spectrum of brainwaves we possess, and in several different ways.

PR-2X: Lifetime warranty, 2-user capability, solid metal case, standard system includes TENcolor lightframes, AC adapter and when purchasing through Mindmachines.com includes the "Ultimate PR-2X Owner's Guide" on CD. The perfect system for beginners, intermediate and advanced users.

XCELR8R: Lifetime warranty, TENcolor lightframes, excellent headphones, customized session ability, sparkle feature, perfect for the advanced light and sound user.

Sportslink Focus Trainer: All sessions created entirely by Dr. Rayma Ditson-Sommer, who for many years has been the leader in light and sound research. This system is used by Olympians and professional athletes as well as children and young adults for increasing their academic performance. With Rayma's patented lightframes, deluxe headphones and excellent owners manual, this system will meet the needs of anyone.

MindsEye: Connect to your PC and design your own sessions. Like a mini personal computer, the Mind's Eye accepts the "software programs" or sessions you want to explore. A library of sessions makes a world of enhanced learning, personal development, and entertainment available at the touch of a button.

Paradise XL: offers a complete variety of unique brainwave stimulation sessions plus selections such as independent brain hemisphere stimulation, binaural beats, digitized heartbeat and music modulation. Professionals prefer the Paradise XL because of its easy programmability, wide variety of sessions and vast number of functions.

Paradise XL+: Omniscreen glasses, digital heartbeat, internal CES, separate left/right hemispheric stimulation.

The world's best Windows programmable audio-visual entrainment / cranio-electro stimulation (CES) device. The AVE section offers a complete variety of unique brainwave stimulation sessions plus selections such as independent brain hemisphere stimulation, binaural beats, digitized heartbeat and music modulation. The CES section may be operated independently or synchronized with the stimulation of the AVE section.

The Sirius (Manufacturer's Suggested Retail Price: $149.00)

The Sirius Mind Machine was formerly known as the Orion Brainwave Synchronizer. The manufacturer designed a new case and added white LED lightframes, then changed the name. Now normally I would slam a 'repackaged' product, but with the Sirius, this is not the case.

First, the Orion Brainwave Synchronizer contained some great built-in light and sound sessions. All you had to do was pick one, press the start button and off you go. It is about as simple as they come. And thankfully the manufacturer understood the effectiveness of his sessions and decided to keep them. A definite plus!

Also, take a look around the internet and see for yourself how if you want white LED lightframes, you have to pay more than 'standard' red or green lightframes. With the Sirius, white LED lightframes are the standard...they are included with the Sirius. I've been asking myself why a basic system like the Sirius comes with white LED lightframes as standard, when all the other manufacturer's charge more to include them. That doesn't really make a whole lot of sense. But I'm not complaining, because the Sirius, with all these little improvements and the manufacturer's emphasis on giving customers the best for less, illustrates how committed the manufacturer is to providing a quality, low-cost and very dependable light and sound instrument.

Why spend more when you can get everything you need at such a low price: highly effective sessions, a great looking unit and white LED lightframes? That's a huge plus, and I thank the manufacturer for having the insight to care about my customer's needs rather than concerning himself with making a few extra bucks. You, the customer, benefit from purchasing this system, designed to last you a lifetime.

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Here are a few of the key features of the Sirius system:

- 21 built-in programs for relaxation, learning, increased energy, visualization and sports performance. The Sirius contains sessions targeting all four brainwave states: beta, alpha, theta and delta.
- AudioStrobe® decode circuitry. This patented technology encodes inaudible control signals within CD audio tracks. These signals directly trigger and control the Sirius lights, resulting in perfectly synchronized audio-visual experiences. Combining the music of AudioStrobe CD's is a very entertaining way of experiencing light and sound sessions.
- Unique random session creates a different session every time it runs.
- Manual control of pulse rate in tenths of a Hertz, from 0.1 to 40.0. Use this to create precise stimulation protocols for your personal preferences and special applications.
- ColorPulse™ decode circuit converts rhythmic sounds (the "beat") from your CD or MP3 player into pulses of light, enabling you to turn any source into a synchronized light show!
- AudioPulse™ decoder and built-in microphone converts any ambient sound into a lightshow.

The Sirius light and sound system includes: a stylish, compact control console with built-in folding stand that is made of hard, shock-resistant plastic; stereo headphones; white LED lightframes; an easy-to-understand owners manual; soft carrying case; stereo patch cord (for connecting your Sirius to your CD or MP3 player) and also an AudioStrobe sampler CD. The Sirius is "Common Power" (CP) polarity.

Proteus (Manufacturers Suggested Retail Price: $229.00)

The Proteus is one of the best mid - range light and sound mind machines available. Period. Just look at all the features it has, and everything it comes with. Then compare those features with the high - end light and sound machines. Quite similar...but at a far more reasonable price. No wonder I have never received a Proteus return. Made of hard plastic, the casing is durable and shock-resistant. Hand-sized with an easy-to-read LED display, it has everything you will ever need in a mind machine. When choosing which light and sound instrument would best meet your specific needs, strongly consider the Proteus. It is built to last a lifetime.

Proteus features include:

- **Realtime BiColor™ output**. Proteus includes two independent color channels, each of which has its own brightness and pulse rate. This means that sessions can shift smoothly between up to 4,096 colors in real time, creating extraordinary visuals and mapping colors more precisely to states of consciousness. For example, lower frequencies can be set to soothing green, while higher, energizing frequencies are the appropriate red; the "peak performance" color amber lies in between.

- **Totally programmable.** The manufacturer developed a simple yet powerful Windows 98+ hosted programming tool, available free of charge.

- **Totally upgradeable.** The Proteus uses advanced Flash memory for both session and operating system data. This means that you can not only download new session groups into the system, but also that the entire operating system can be upgraded. Recently, upgrades have included such advanced features as wavetable crossfading; dual binaural beats; BioConnect™ real-time biofeedback control, and more.

- **Wavetable audio.** This light and sound instrument includes stereo audio digital to analog converters, enabling production of binaural beats and other waveforms. You can store up to four different waveforms, and an audio waveform creation tool is also included with the bundled software.

- **Enhanced AudioStrobe™**. The manufacturer fine-tuned the Proteus' AudioStrobe decoder circuitry, providing a much crisper, more intense experience.

- **199 program capacity.** The Proteus ships with expanded versions of the best programs taken from earlier models (especially the Orion and MindLab). A total of fifty programs are preloaded into Proteus when you receive it. Plus, there is plenty of space remaining for you to download your own creations—about 2,000 segments altogether in two separate banks.

- **Free Proteus Editor software.** You can download the latest version of the Proteus Editor from the Proteus support site. Choose from a host of programmable features, including: single or dual binaural beats; create and download your own audio wavetables; synchronize the two color channels or run them at completely different frequencies; control the lights and sound in real time using the ThoughtStream biofeedback system; create "random" programs within constraints you choose (for example, frequencies constrained to 9-12 hz and segment lengths of 1 to 3 seconds) and Proteus frequencies range from 0.2 to 50.0 Hz.

The Proteus light and sound system includes a hand-sized control console; combination Ruby / Emerald lightframes; stereo headphones; audio patch cord; an easy-to-understand owners manual; AudioStrobe sampler CD and the Proteus Editor software with user manual (via download). The Proteus operates on three "AA" alkaline batteries, not included.

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Zen Master (Manufacturers Suggested Retail Price: $259.95 with White Lightframes or $349.95 with TENcolor Lightframes).

The **Zen Master** is one heck of an under-rated mind machine. Not since the InnerQuest IQ - III has a manufacturer possessed the where-with-all to combine a light and sound machine with a CD player (excuse me, the IQ - III was with a cassette player, not a CD player). Less wires to connect, less hassle period. The Zen Master has great built-in sessions, is easy to use and it's portability ensures you can take it anywhere. As my customers have said, the Zen Master is a real joy to own.

The Zen Master incorporates the most advanced features found in the “PR-2X” model tucked neatly inside a personal CD player, creating the most convenient and easy to use mind machine ever made. No more extra cables to connect, no more having to carry around two different devices, just a portable CD playing your favorite sounds combined with the power and features of the “PR-2X”, all running on two AA batteries. Here are some of the features included in the Zen Master CD Player:

· The **Zen Master** is a normal CD player complete with track programming capabilities and 10 second anti-skip.

· A full featured light and sound instrument with 50 built-in light & sound sessions (like having a complete PR-2X system)

· Additionally, it contains 5 “Autopilot” programs for generating an unlimited number of unique light and sound sessions, each targeting a different brain wave state (Beta, Alpha, Theta, Delta & Super-Beta, which is also referred to as Gamma).

· The ability to store up to 25 additional “Autopilot” generated programs for a total of 75 programs. Time adjustment…. allowing you to scale and control the time of any program from 5 minutes to 2 hours. Complete manual control including the “pulse width or duty cycle” from 10%-90%

· Exclusive “Sparkle” feature – another unique innovation providing stunning visuals (and bet-

ter entrainment) by controlling and changing the duty cycle in three distinctive patterns. Personal Preference Program (PPP) for allowing you to store your favorite settings on the Zen Master light and sound instrument . Also offers a full frequency range of .5Hz – 40Hz.

· Six unique stimulation modes. Outstanding binaural sound synchronized with the lights. Standard system includes white light LED glasses (one manufacturer charges $99 just for a pair of white led glasses).

· Convenient thumb-wheel control of brightness for instant adjustment of light intensity. TurboSonix feature – for decoding visual pulsed encoded CD's. Also compatible with AudioStrobe. Includes 3-CD set of the Turbosonix strobe encoded CD's (retail value of $39.95), deluxe stereo headphones and 1 year parts and labor warranty.

PAL (Manufacturers Suggested Retail Price: $240.00)

The Pal (Portable and Lightweight) light and sound machine is a little known gem stocked full of features no other manufacturer has thought to incorporate. It is a little harder to understand how to use - at first - but after a little experimenting while reading the very detailed owners manual, you will be able to access the complete spectrum of brainwaves we possess, and in several different ways. The PAL light and sound instrument is really geared towards the serious user, with serious results. This light and sound instrument is a success in both the educational and medical fields, and is proving it's worth in enhancing athletic performance, for both the professional and weekend warriors. If you are serious about making a good thing better, the Pal light and sound system can be a resourceful tool.

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To ensure safe, gentle and effective audio-visual stimulation (AVS), the DAVID PAL offers the following:

- **Tru-Vu OmniscreenTM Eyesets** - These unique Tru-Vu Omniscreen Eyesets were carefully designed to provide you with the most effective and safe light and sound experience. The Tru-Vu Omniscreen Eyesets for the PAL use eight light blue lights mounted over a silver reflector behind a translucent screen. This disperses the light evenly. Our new Tru-Vu Omniscreen Eyesets are specially designed to allow for the left and right visual fields of each eye to be individually stimulated rather than the entire eye. With the Tru-Vu Omniscreen Eyesets, the lights flash into the left visual fields of both eyes, then alternately flashes into the right visual fields of both eyes. This approach allows the ability to stimulate either visual cortex with a frequency different from the other visual cortex. For example, a person who functions strongly from the left brain could have 8 Hz stimulated into the right visual field (and therefore the left brain) to slow down left brain function and have 18 Hz stimulated into the left visual field to increase right brain function.

- **Isochronic Pulsed Tones, Binaural Beats and Chime** - The tones of the PAL are evenly spaced, are of equal pitch and are turned on and off at a specified rate. This is important to enhance the effectiveness of audio entrainment.

- **Soft-Off** - The gradual lowering of the lights and tones at the end of the session prevents a startle response (also known as somatic shock). Soft-Off ensures that relaxation and other benefits carry over even after a session has ended.

- **Battery Power Indicator -** At a quick glance you can tell if your battery has enough power to run your session. New eyeset technology allows for much longer life for your 9-volt battery.

- **Easy-To-Find Intensity and Volume Buttons** - The intensity and volume buttons are raised so that you can make the necessary adjustments easily and quickly, even with your eyes closed. Adjust the intensity of the Omniscreen Eyeset with the easy-to-find INT button.

- **18 Preset Sessions** - Including Brain Brightener (for ADD and cognition), Fractioned Hypnosis, Alpha/Beta Mix (for depression), Schumann with Dissociation & HRV (for meditation), Beta Perker, Theta with Dissociation (for sleeping), and Sound Sync (to turn your music into an intriguing light show).

The DAVID PAL comes complete with: Tru-Vu Omniscreen Eyesets; Quality Stereo Headphones; Stereo Patch Cord; Soft Carrying Bag; 9-Volt Alkaline Battery; Comprehensive Operator's Manual and DAVID User's Guide. 9V adapter optional.

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PR-2X (Manufacturers Suggested Retail Price: $329.95)

When my local law enforcement agency's Behavioral Science Services Division gave me permission to offer light and sound stimulation for their 911 Emergency Operators, the **PR-2x** was the only mind machine I utilized. All 45 911 Operators who participated in this study unanimously endorsed light and sound as a means for coping with the stress related to their jobs and responsibilities, and suggested such a technology be made available to all 911 Operators within their Operations Center. Again, the only light and sound system I used for this study was the **PR-2x**. Need I say more?

PR-2X features:

- 50 preset programs with adjustable run-times from 10 to 120 minutes. "AutoPilot" generates new programs each time. Select from Super Beta, Beta, Alpha, Theta, or Delta ranges and experience a new program. If you wish, save it and replay it again later.
- 4 different sound possibilities including Binaural Beats (Hemi-sound). You can use them to create a relaxing background while working or studying by connecting to your stereo system. 6 modes of synchronizing the lights with the sounds. Pitch control by musical notes to harmonize with music. Standard system includes RGB TENcolor lightframes! 3 digit display of program data and frequency (1 to 40 Hz).
- Built-in rechargeable battery (charger included). Manual control (to experiment with frequencies and modes). Pause control (keep a program running at a desired point).
- Pulse width control (sharpness of light pulses from 10 to 90%). Auto shut-off (unit powers down 15 minutes after program ends). External stereo input for tape or CD player.
- Quality stereo headphones. Output jacks for 2 user capability. Soft on and off for gentle starts and finishes. AudioStrobe compatible.
- User-programmable (create and store 10 custom sessions). Personal preference settings for starting levels of volume, brightness, tone. No need to reprogram each time because the **PR-2X** learns what you like!
- Displays the time remaining in a session. Blend feature for smooth transitions between phase changes (when going from simultaneous lights & sounds to left/right)
- Includes the TurboSonix 3-CD set with over 3 hours of "Strobe Encoded" audio tracks including both relaxation & energizing programs.

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XCELR8R II (Manufacturer's Suggested Retail Price: $399.99).

The **XCELR8R II** is not your mainstream light and sound instrument. Yes, it is full of bells and whistles, is easy to operate and has sessions that all of us can enjoy and reap benefits from. But the **XCELR8R II** is more: it is different and unique. It's like that old saying you hear so often in this industry: unless you try this mind machine, you will never truly understand or appreciate it's potential. **The XCELR8R II includes ALL the features found in the popular PR-2X plus the ability to connect to a personal computer for developing VERY customized light and sound sessions.** Compare this light and sound instrument to other, more expensive systems. They are quite similar, except for the price. This is a light and sound system for the true mind explorer!

In addition to having the ability to create your own customized light and sound sessions, the **XCELR8R II** features:

- 50 preset programs with adjustable run-times from 10 to 120 minutes. "AutoPilot" generates new programs each time. Select from Super Beta, Beta, Alpha, Theta, or Delta ranges and experience a new program. If you wish, save it and replay it again later.
- 4 different sound possibilities including Binaural Beats (Hemi-sound). You can use them to create a relaxing background while working or studying by connecting to your stereo system. 6 modes of synchronizing the lights with the sounds. Pitch control by musical notes to harmonize with music. Standard system includes RGB TENcolor lightframes! 3 digit display of program data and frequency (1 to 40 Hz).
- Built-in rechargeable battery (charger included). Manual control (to experiment with frequencies and modes). Pause control (keep a program running at a desired point). Upgradeable software via a user-replaceable microchip.
- Pulse width control (sharpness of light pulses from 10 to 90%). Auto shut-off (unit powers down 15 minutes after program ends). External stereo input for tape or CD player.
- Quality stereo headphones. Output jacks for 2 user capability. Soft on and off for gentle starts and finishes.
- User-programmable (create and store 10 custom sessions). Personal preference settings for starting levels of volume, brightness, tone. No need to reprogram each time because the **XCELR8R II** learns what you like!
- Displays the time remaining in a session. Blend feature for smooth transitions between phase changes (when going from simultaneous lights & sounds to left/right)
- Includes the TurboSonix 3-CD set with over 3 hours of "Strobe Encoded" audio tracks including both relaxation & energizing programs. And it is AudioStrobe compatible.

SportsLink Focus Trainer (Manufacturer's Suggested Retail Price: $349.95)

Dr. Rayma Ditson-Sommer, the developer of the SportsLink, has probably forgotten more things about light and sound neurotechnology than the majority of the light and sound industry leaders will ever know. Dr. Ditson-Sommer has utilized light and sound stimulation for DECADES, mostly with learning disabled and hyperactive children (because they are dear to her heart) but also for Olympians and professional athletes, and just about everyone in between. Her Olympians win medals, lots of them, and her pro athletes win championships, again, lots of them. Rayma keeps a low profile, but her work, her genius, is second to none.

Her light and sound instrument, the SportsLink, is not full of bells and whistles, rather, it contains some of the best light and sound sessions ever designed. And highly effective sessions are far more important than frills any day. Her SportsLink is used worldwide, embraced for it's effectiveness, and has proven repeatedly that for those who use it, who apply her sessions to their daily regime, greatly improve their performance in whatever field they belong. This is one of the best mind machines ever made. Not once has anyone ever returned a SportsLink that they've purchased from me.

So for you who are driven to improve the quality of your life, to take what you do and how you do it to the next level, the SportsLink is a must.

The SportsLink Focus Trainer utilizes carefully researched and thoroughly field-tested frequencies of audio and visual stimulation. Their proprietary technology, developed by the foremost expert in the field, Dr. Rayma Ditson-Sommer, will assist you in reaching and maintaining top levels of performance. It works by training you to quiet your mind.

I. Performance Focus, Concentration, Attention, Motivation, Relaxation, Calmness

These sessions will help you maintain your optimal performance state from start to finish. They will help you overcome mental distraction and will also enable you to decrease performance anxiety, allowing you to operate at top proficiency. You will train your mind and body to remain in "synchrony," operating in balance with each other.

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II. Active Practice: Imagery, Visualization, Learning Imagery and visualization are powerful athletic performance tools. These sessions will assist in creating the ideal states for performing at your best. As you practice visualizing success, it will enable you to overcome self-defeating scripts and release mental blocks you may be experiencing. Sessions within this group are also designed for open-eye use during certain aspects of your performance. Practice activities, where movement is at a minimum, such as target practice, can utilize this feature. You can also effectively use open-eye mode with videotapes of previous performances. By activating the non-critical part of your mind to observe, absorb and learn at a deeper level, you will perform better in the future. The learning session allows you to assimilate information faster and more effectively.

III. Rejuvenation: Rest, Recovery, Travel When the mind is calm, the body is better able to rejuvenate itself. Even when sleeping, your mind can remain very active. Quieting the mind allows your body to revitalize more quickly. You will find this to be true when you begin using these sessions and experience a feeling of deep rest and relaxation after just a few short minutes. These sessions can offer a quick charge or help you obtain a longer rest.

MindsEye (Manufacturer's Suggested Retail Price: $349.95)

The MindsEye light and sound machine is for 2006 and beyond, and includes the ability to interface with the ThoughtStream biofeedback device. You can even connect to your PC and design your own sessions!

The MindsEye is a different kind of mental fitness system ... It's affordable, versatile, expandable. A light and sound machine designed for maximum flexibility to suit your needs!

Not only is the new MindsEye the only light and sound machine that comes with 50 different pre-set, goal-specific sessions, it can also be programmed to play even more sessions from

separate cassette tapes. Like a mini personal computer, the MindsEye accepts the "software programs" or sessions you want to explore. A library of sessions makes a world of enhanced learning, personal development, and entertainment available at the touch of a button.

The MindsEye is a mental fitness system that grows with you!

Features: 50 pre-set sessions. Goal specific sessions in five different categories -

- Each one developed by leaders in the field - Frank Young, Ph.D., Dr. Rayma Ditson-Sommer, Thomas Budzynski, Ph.D., Dr. Jeffrey Thompson, and many more.
- Download sessions. "Program" the Mind's Eye with other light/sound collections on inexpensive cassette tapes - up to 25 sessions at a time!
- Adjustable brightness and volume. Adjust the volume and LiteFrames while a session is in progress. Maximum convenience. Maximum comfort.
- Synchronize binaural beat to pulse rate. This powerful effect, known to enhance a session's effectiveness, can be added to any session.
- Soft on/soft off. No more abrupt starts and stops. All sessions begin with a gradual increase of brightness and volume, and end with a soft fade off.
- Pause. No need to start a session over if you are interrupted for a moment. Simply pause program in progress and resume when you return.
- Audio crossfades and brightness ramps. The highest session quality with enhanced complexity and changes. Subtler audio crossfades (the blending of one sound pattern into another) and brightness rampings.
- Sound options. Select from four different sounds. Adjust the pitch, or add a binaural beat synchronized with the pulse of the lights!
- Research shows that light and sound users gain even more benefit when a session is accompanied by audio material specific to their needs. Increase your powers of growth and boost your learning.
- Built in rechargeable NiCad batteries
- Design. Sleek contemporary design with real keypad. Portable, too.

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The DAVID Paradise XL / Travel Model (Manufacturer's Suggested Retail: $495.00)

The Paradise XL is a Windows programmable light and sound stimulation device. It offers a complete variety of unique brainwave stimulation sessions plus selections such as independent brain hemisphere stimulation, binaural beats, digitized heartbeat and music modulation. This product is the one most chosen by psychologists, medical doctors and clinicians of all types. Professionals prefer the Paradise XL because of its easy programmability, wide variety of sessions and vast number of functions.

Presently, several clinicians are using the recently developed ADD and depression reduction sessions.

Audio-Visual Stimulatiom (AVS):

To ensure safe, gentle and effective audio-visual stimulatiom (AVS), the Paradise XL offers the following:

Tru-Vu Omniscreen Eyesets - Our unique Tru-Vu Omniscreen Eyesets were carefully designed to provide you with the most effective and safe light and sound experience. The Tru-Vu Omniscreen Eyesets use eight high efficiency white bulbs mounted over a silver reflector behind a light blue-tinted translucent screen. This disperses the light evenly, protects the bulbs and removes any red light which may be produced by the bulbs. White light has been proven most effective in imagery, relaxation and visualization. Our new Tru-Vu Omniscreen Eyesets are specially designed to allow for the left and right visual fields of each eye to be individually stimulated rather than the entire eye.

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With the Tru-Vu Omniscreen Eyesets, the lights flash into the left visual fields of both eyes, then alternately flashes into the right visual fields of both eyes. This approach allows the ability to stimulate either visual cortex with a frequency different from the other visual cortex. For example, a person who functions strongly from the left brain could have 8 Hz stimulated into the right visual field (and therefore the left brain) to slow down left brain function and have 18 Hz stimulated into the left visual field to increase right brain function.

Isochronic Pulsed Tones - The tones of the DAVID are evenly spaced, are of equal pitch and are turned on and off at a specified rate. This is important to enhance the effectiveness of audio entrainment.

Pulsed Tones - Pure tones of equal pitch are turned on and off at a specified rate.

Color Overlays - Colored filters which can be attached to the Tru-Vu Omniscreen Eyesets for use in color therapy. Included are the colors; yellow, green and violet. Also available for an additional cost are ruby and indigo.

Soft-Off - The gradual lowering of the light stimulation at the end of the session prevents a startle response (also known as somnatic shock). Soft-Off ensures that relaxation and other benefits carry over even after a session.

Each DAVID Paradise XL comes complete with: Tru-Vu Omniscreen Eyesets; Quality Stereo Headphones; Stereo Patch Cord; DAVID Carry Bag (with travel model only); Three color overlays (violet, green and yellow); A/C Adapter; Session Editor Software on CD; Computer Port Cord (Com Cord); Comprehensive Operator's Manual and DAVID User's Guide. Travel means that the DAVID comes with an internal rechargeable battery pack and can be charged with the adapter provided and then run without electricity. Desktop means that the model must be plugged into an electrical outlet (using the adapter provided) in order to operate. The travel model also comes with a DAVID travel bag.

Five ways to operate the DAVID Paradise XL:

35 Preset Sessions (including Accelerated Learning, Fractionated Hypnosis, Dental/Pain Reduction, Schumann Resonance, Beta Perker, Alpha Relaxer and many more.)

Manual Operation - Allows you to tailor your session as you like and in real time

Music Modulation - The rate of the lights and tones change according to the bass and treble notes of your music selection.

Easy, Modular Programming Using Windows (3.1, '95, '98, XP and 2000) - Create up to 30 personalized sessions with a wide variety of settings and selections. This software allows you to create unlimited amounts of new sessions.

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Special Application Packages - Specially designed sessions automatically download for the DAVID devices to run these specific applications and uses.

FEATURES: Selection of Stimulation Patterns:

Select focus, expand or hemistep pattern of stimulation (whichever is most comfortable for you or depending on the application or use).

Two Digit Display
To show session number, rate, volume, intensity and pitch selections

Tone Selection

- Surf (constant on to block out background noise)
- Pulse Pure Tone (with variable pitch)
- Binaural Beats (with variable pitch)
- Heartbeat

Independent Right Eye / Left Ear Rate
Adjusts the stimulus rate of the right visual fields of both eyes and right ear (pulse tones) or the left visual fields of both eyes and the left ear. This method produces effective dissociation and allows a different frequency to be generated into each hemisphere of the brain. This technique is particularly beneficial for those with anxiety, depression, ADD/ADHD and cognitive decline (in seniors).

Preferences Selection
Set your own intensity, volume, tones, pitch of tones, and heartbeat on or off so that they are automatically set every time you turn the Paradise XL on.

Session Extend Key
Extend any session by 10 minutes at any point during the session.

Focus/Expand

Calmer people prefer focus whereas people with difficulty turning off the "chatter" prefer to use expand

Easy-to-Use Keypad
Easy to make selections and adjustments while eyes are closed during a session.

Two-User Capacity

For an additional cost, an Extra User Package can be purchased which includes; a Tru-Vu Omniscreen Eyeset, stereo headphones and splitter cords, which allows two people to use the DAVID XL at the same time.

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Paradise XL+ / Travel Model (Manufacturer's Suggested Retail Price: $630.00)

Light and Sound Machine with built in CES!

The Paradise XL+ is the only light and sound mind machine that incorporates CES (Cranial Electro Stimulation) for a fantastic innerscape experience. Mind Alive includes all the bells and whistles you would expect to find in a high end light and sound device, then takes it to the next level by adding CES. A truly incredible system ... well worth the price!

The DAVID Paradise XL+ is a Windows programmable audio-visual entrainment / cranio-electro stimulation (CES) device. The light and sound section offers a complete variety of unique brainwave stimulation sessions plus selections such as independent brain hemisphere stimulation, binaural beats, digitized heartbeat and music modulation.

The CES section may be operated independently or synchronized with the stimulation of the AVS section. This product combines the Paradise XL, the one most chosen by psychologists, medical doctors and clinicians of all types with the Oasis, our popular CES device. Professionals prefer the Paradise XL because of its easy programmability, wide variety of sessions and vast number of functions.

Presently, several clinicians are using our recently developed ADD, fibromyalgia, brain injury and depression sessions (some applications require a confidentiality agreement). To ensure safe, gentle and effective brainwave entrainment, the Paradise XL offers the following: Tru-Vu Omniscreen Eyesets - which are specially designed to stimulate the left and right visual fields of each eye individually, rather than the entire eye. This approach allows the ability to stimulate each visual cortex with a frequency different from the other visual cortex. The Tru-Vu Omniscreen eyesets use high efficiency white bulbs mounted over a silver reflector behind a light blue-tinted translucent screen. This disperses the light evenly, protects the bulbs and removes any red light which may be produced by the bulbs. Isochronic Tones - The tones of the DAVID are evenly spaced. This is important to enhance the effectiveness of audio entrainment.

Pulsed Tones - Pure tones of equal pitch are turned on and off at a specified rate. Soft Off-

The gradual lowering of the light and sound stimulation at the end of the session prevents a startle response (also known as somatic shock). Soft-Off ensures that relaxation and other benefits carry over even after a session.

Five ways to operate the DAVID Paradise XL:

35 Preset Sessions (including Super Learning, Cleaning Out the Closet, Pain Reduction, Schumann Resonance, Beta Perker, Alpha Relaxer and more)

Manual Operation - Allows you to tailor your session as you like and in real time.

Music Modulation - The rate of the lights and tones change according to the bass and treble notes of your music selection.

Easy, Modular Programming Using Windows (3.1, \\\'95, \\\'98) - Create up to 30 user-defined sessions with a wide variety of settings and selections using the 240 modules available.

Special application sessions - Specially designed sessions for the DAVID devices for specific applications and uses.

Selection of stimulation patterns: Select focus, expand or hemistep pattern of stimulation (whichever is most comfortable for you or depending on the application or use).

Two-digit display - To show session number, rate, volume, intensity and pitch selections.

Tone selection -Surf (constant on to block out background noise) Pulse Pure Tone (with variable pitch) Binaural Beats (with variable pitch) Heartbeat

Independent right eye/left ear rate -Adjust the rate of the right eye and left ear independent of the rate of the left eye and right ear to experience two different brainwave states simultaneously. This is most effective when used for lucid dreaming, independent hemispheric stimulation and differential experiences.

Preferences selection -Set your own intensity, volume, tones, pitch of tones, and heartbeat on or off so that they are automatically set every time you turn the Paradise XL on.

Session extend key -Extend any session by 10 minutes at any point during the session.

Focus/expand selection - Calmer people prefer focus, people with difficulty turning off the \\ \"chatter\\\" prefer to use expand.

Easy-to-use keypad -Easy to make selections and adjustments while eyes are closed during a session.

Two-user capacity -For an additional cost, extra Omniscreen eyesets, headphones and splitter cords are available allowing two people to use the Paradise XL at the same time.

Other features -Stereo tape/CD input Small and portable Colored overlays for color therapy; Carry case (travel unit); Internal rechargeable batteries (travel unit); Comprehensive Operator\\ \'s Manual; State-of-the-art CMOS technology CSA and UL approved plug-in power adapter.

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ALLcolor Visual Stystem™

An Amazing Stand-Alone Color Therapy Device
That Also Works with ANY Light and Sound Machine

Hemispheric

Color Control

The Purest

White Light

Color Therapy Meets Light and Sound

Over 4000 Colors - 1 Pair of Light Glasses

The Color Therapy "Dream Machine" for the Light and Sound Enthusiast

Why settle for one color of light glasses?
Why buy several pairs when you can get
the ALLcolor Visual System and have.....

ALL the Colors in the Rainbow!

Now Available and IN STOCK @ www.MindMachines.com

What Type Of System Do You Need?

If you need to relax, you do not need an expensive machine. There are many instruments available that will meet your needs. These units cost under $200. Most of these instruments contain sessions in the beta, alpha, theta and delta brain states. Most are made of hard plastic while others are of metal. Both are durable, have very few moving parts and should last for years. These instruments are simple to operate and are perfect for beginners as well as advanced light and sound users.

If you are interested in mind exploration, then get an instrument that offers a variety of built-in sessions. Most have space available for you to custom design your own sessions. Probably the greatest advantage to having a more advanced model is the fact that most all of them have computer interfaces. This allows you to view a series of sessions that are contained on computer disks via your monitor, select which sessions that will meet your present needs, then download them directly to your light and sound instrument. You will have the opportunity of increasing your session library without the need for purchasing a new instrument. Light and sound units that fall into this category have a wide range of price. Many sell for around $300. Others can cost more than $700. So educate yourself. Shop around. They are all well worth their price, just make sure you are happy with your choice.

As you are undoubtedly aware, possibly to the point of confusion, there are a variety of models available in all price ranges. Some are for specific needs, some for specific purposes. Others have features similar to more expensive systems, but on a smaller scale (like containing less memory or having fewer built-in sessions). The Zen Master even includes a built-in CD player! It all depends on what you want light and sound sessions for and how much you are willing to spend.

Lightframes: What Color Should You Choose?

For many years choosing a color was easy. You choose red. That's all there was. Then came green, then a combination of both, then things grew crazy.

There are three different methods for producing pulsed light stimulation. Most manufacturers use LED bulbs. Another uses incandescent bulbs. More recently, a major breakthrough occurred, enabling RGB-based (Red-Green-Blue) LEDchips to be utilized. The LED style is better than the incandescent variety. Incandescent bulbs tend to have a bleed-over effect at higher frequencies, they just can't turn on and off (blink) efficiently at high rates. LED bulbs can. But LED lightframes have shortcomings too. They come in one color, two colors or a combination of both. And not all colors are available in an LED format. Your color choices are limited. If you want a variety of colors, be prepared to spend a lot of money and have a large box to store them. Have the color of each lightframe plainly marked, because when looking for a particular color in a box full of lightframes, having to search for the color you want can take time.

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I grew very tired, and a bit frustrated, of having to search through the box I keep my lightframes in every time I wanted to change colors. I also understood why the manufacturers had no reason to change. That was obvious. The more colors an individual wants, the more lightframes that individual needs to buy. Why would manufacturers want to change that?

But a change was needed. So I sought the help of Chris Williams and together we created the next generation of lightframes. Our lightframes utilize RGB-based (Red-Green-Blue) LEDchips that produce a purer and brighter color than LED bulbs, can generate colors not available in the LED bulb format, features independent left / right color eye control, and can generate a variety of colors with just one lightframe. For the person wanting over 4,000 different shades, blends and mixtures of color that can be experienced through a single lightframe, we developed the **ALLcolor Visual System**® (ACVS). It is capable of generating constant light (for Color Therapy) or pulsating light (can be used with *any* light and sound instrument). And it's perfect for easily and quickly experiencing all the Chakra colors! The ACVS is the first of it's kind, truly unique in design, and used by individuals and professionals worldwide. It is the best lightframe made. If you are in search of the ultimate lightframe to compliment your light and sound instrument, the ACVS is it.

With the ACVS being available since 2004, light and sound manufacturers are well aware of it's popularity. And with the exception of only one manufacturer that I have spoken with, all have said they are coming out with their own RGB-based lightframes. Now that one of their biggest profit-makers, that being the sale of lightframes offering just one or two colors each has been impacted, of course they are!

The **ALLcolor Visual System**® is not expensive. It is exclusively made for Michael Landgraf Enterprises LLC and sells for $199. As a result, many light and sound users find it to be the best source for experimenting with the full rainbow of colors.

Chris Williams and I also made a smaller version, consisting of ten different colors. The reason for creating the ACVS was to have just one lightframe produce a myriad of colors (over 4,000 different blends and shades). The reason for creating a smaller version was to offer the general light and sound-using public a choice. Check out the suggested retail prices for single color LED lightframes. As of this writing (December, 2005), you can pay up to $99 each for the joy of owning white or blue or 'extra-powerful' green LED lightframes. Indigo lightframes cost almost as much. To have red, green, yellow, even orange colored LED lightframes, expect to pay around $30 each. What about gold, pink, aqua or violet? Sorry, but LED bulbs are not yet available in those colors. To enjoy several colors, to add variety to your light and sound sessions, could easily end up costing you more than you paid for your light and sound instrument. That is not cost-effective nor is it fair to expect consumers to purchase multiple lightframes for each color they wish to experience. With the ALLcolor Visual System®, you decide what color you want to experience. If you purchase lightframes from manufacturers, you have no choice—they decide for you! And with the ACVS being analog controlled, you can select the exact shade you want. Manufacturers use digital control, so you lose the ability of choosing the exact shade and blend of color you want.

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TENcolor™ lightframes utilize RGB-based LEDchips (just like the ACVS) and connect directly to *any* light and sound instrument (choose either Common Power or Common Ground polarities). A built-in switch allows you to choose from ten different colors: pure blue, pure green, pure red (and bright red), rose quartz, yellow, white, aqua, violet, indigo or California gold. No bulky wires, excellent balance, left / right independent color eye control, brightness beyond normal LEDs, colors more pure than what LED bulbs can generate and by manipulating the light intensity dial on your light and sound instrument, will actually alter the shade of color you desire. Price? They retail for $89. That is $10 below the retail price one manufacturer charges for just their white LED lightframes or for their blue!

If you enjoy mind exploration, and own a light and sound instrument or utilize constant light for color therapy, consider the ALLcolor Visual System®. If you are a cost-conscious user of light and sound, having your unit mainly as a tool for relaxation, consider TENcolor™ lightframes. Either way, you'll enjoy a variety of colors while you experience your sessions right from the start.

What should you know about taking advantage of the left / right independent eye control of your lightframe? And since having a minimum of ten different colors to enjoy while doing light and sound sessions right from the start (without having to change lightframes just to enjoy a different color) is now more reality than wishful thinking, how are these various colors used?

Left and right independent eye control was included in the ALLcolor Visual System® and TENcolor™ lightframes to give you greater control of the pulsed light stimulation. It allows you to simultaneously activate or relax either your left or right brain hemisphere. With no means of eye control, the pulsed light stimulation being generated affects both hemispheres of the brain equally. For overall calming or energizing, that is fine. But what if you wish to work on your right hemisphere, not your left, and vice versa? That's when having this control proves advantageous. Simply stated, if you would like to activate the right hemispheric region of your brain, but not the left, select a warm color (yellow, orange or red for instance) for the left eye of the lightframe and for the right, select a cooler color (such as violet, blue or green). Just remember, the left eye affects the right brain hemisphere and the right eye affects the left. To learn more about this feature, please refer to the References & Suggested Reading List.

Even though we all think and are affected differently by pulsed light stimulation, certain colors appear to work best, in a generalized kind of way, for helping to enhance certain abilities or to achieve certain sensations and emotions. Although any color of light would deliver the benefits of a light and sound session, specific colors will help get you there faster, even more deeply. When you are considering the various colors, wondering which color would best apply to your situation and what a particular color is normally associated with, here is a generically accepted guide: use blue color stimulation for delta (sleep / clearing); use green color stimulation for theta (meditation / visualization); for alpha (learning / relaxation) use yellow stimulation; and

for beta (focus / energy) use orange or red colored stimulation. Based on what I have read, personally experienced and received as feedback from my customers these past twenty years, here are the most common colors for pulsed light and what they are used for:

Red - invigoration, extroversion, strength, activity, vitality, energy, action. Red provides a wide range of colorful visuals for most people. Red may be a 'warm' color, often thought to be more appropriate for beta sessions, but not necessarily. Red color, when used with your eyes closed, stimulates the cortex of your brain into generating some of the most delightful shades, blends and swirls of colors possible. Red color stimulation can help you relax.

Orange - subconscious, relationships, interaction, creativity, change, sexual, social. Although soft and subtle, orange can invigorate and energize the light and sound listener. Sometimes referred to as the color Amber, it falls between red and yellow. If you find the color red too intense and green too dim, try this color.

Yellow - concentration, learning, thinking, idealism, memory, sunny, focus. Yellow is highly recommended for soft , yet subtle light and sound experiences. The color yellow is considered to be excellent for use while studying.

Red, orange and yellow are viewed as ’warm’ colors and are stimulating (excitatory). These colors are often utilized when experiencing sessions containing higher frequencies such as beta.

White - effective for working with imagery, relaxation and visualization. White generates a richness in colors and sense of dimension that no other pulsed color can imitate. White can attain a brightness intensity similar to red while generating color pulsations that appear to float before your eyes. White light is the most popular color used, offering full spectrum stimulation to ensure that the red, green and blue cones of the retina receive full stimulation similar to the natural light spectrum.

“Cool” colors like green, blue and violet are calming (inhibitory). These colors are most often used with sessions having lower frequency stimulation, targeting the deeper brainwave states known as alpha, theta and delta.

Green - compassion, revitalizing, peaceful, renewal, calming, balance, healing, love. Preferred by those experiencing certain degrees of light sensitivity. The color green is associated with nature and with heightening the emotional qualities of the heart.

Blue - use for communication, contemplation, contentment, meditation, relaxation, sensitivity, creativity and sleep. Blue will generate a profound sense of calmness and a feeling of deep relaxation and is believed to contribute to the creation of ordered thought and harmonious moods.

With the exception of the ALLcolor Visual System®, most lightframes come in one of two polarities: Common Power (CP) or Common Ground (CG). The polarities are not interchangeable, meaning if your lightframes are CP polarity, they will not work on a CG light and sound instrument, and vice versa.

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I always thought it was a rather lousy idea to have two different polarities, because some of my customers own more than one light and sound unit. More often than not, they'd be of different polarities. So they could not interchange the lightframes, which aggravated more than a few of them, and they let me know how they felt about this unnecessary inconvenience.

So Chris Williams created **Lightframe Polarity Adapters**. They are a twelve inch cord that quickly connects between your lightframe plug and light and sound unit's "light in" port. These adapters allow you to use any 'CP' lightframes with any 'CG' light and sound unit or 'CG' lightframes on units that are 'CP' polarity. This saved my customers the hassle of having to own duplicate lightframes of the same color, just because the polarities they ran on were opposite. No session light distortion or intensity degradation occurs from using them, and they are a cost-effective solution to an annoying problem.

Here is a list of popular light and sound instruments that are Common Ground (CG): MindGear (all models) and InnerQuest IQ I, II, III and Jr. Common Power (CP) systems include: MindPlace (all models), MindAlive (all models), InnerQuest (Tutor and 9110) and Zygon (MindQuest). So if you have a MindGear lightframe and want to use it with a MindPlace unit, the only thing required is a CG lightframe to CP unit polarity adapter. For a more detailed description, visit www.mindmachines.com under Polarity Adapters.

So you can purchase single color LED lightframes and pay anywhere from $30 to $100, invest in incandescent bulb lightframes, which normally cost from $75 to over $100, or you can spend $89 for the TENcolor lightframes and enjoy multiple colors at a consumer-friendly price. Of course, should your budget permit, treat yourself to the granddaddy of all light-stimulating frames by purchasing the ALLcolor Visual System®. The choice is yours. Mindmachines.com has plenty of information regarding lightframes and invite you to visit and learn more before deciding upon which style would best meet your needs.

This section has focused on the closed-eye variety of lightframe, and we believe the two best models are the ALLcolor Visual System® and TENcolor lightframes in terms of quality, user-enjoyment and cost-effectiveness. There is one other style that should be mentioned, that being the open-eyed variety of lightframe. This style allows you to experience pulsed light stimulation with your eyes open. Although one manufacturer has offered this style for a couple of years, there is a newer version now available from Mind Gear, the premier manufacturer of light and sound instruments. The Mind Gear open-eyed lightframes are by far the best on the market and retail for approximately $89. They are less expensive than the other open-eye model, but well worth it! Complete details of Mind Gear's new lightframes can be found at mindmachines.com.

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Headphones: What to Expect

Although the selection and quality of lightframes have improved greatly over the last couple of years, headphones are a different story. Lately it has been getting better, but still, if you buy an inexpensive system, you will receive inexpensive headphones (not flimsy, just not high quality). Because the sound quality is so important to brain entrainment, you would think the manufacturers would put more effort into including a quality set of headphones into all of their products. Many don't. You suffer. Even purchasing an expensive system does not guarantee that you will receive a high quality, long-lasting set. But as I mentioned, it is getting better. Light and sound systems from Mind Alive and Mind Gear come with top-quality headphones. They are comfortable, easily adjustable and do a nice job of blocking outside noise. If you purchase one of their systems, you should find the headphones that are included very acceptable.

Still, it drives me nuts when I'm doing a light and sound session or assisting someone else and crackles happen. Ruins the whole effect! So here is something to keep in mind: keep the headphones that come with your system as a backup. Watch for sales at your neighborhood Audio/Video Dealer and purchase headphones that you really like. Go for comfort and how they block outside noise. If you buy wireless, you will not be happy.

Here are two other tidbits of information that can make your light and sound system of greater use:

First, if you have a 2-user machine like the PR2-X where there are two ports for both headphones and lightframes, then all you need is one extra lightframe and headphone for 2-user use. But if your system only has one port for lightframes and one for headphones, two people can still experience a session simultaneously. In addition to purchasing one extra lightframe and headphone, visit your local electronics store and buy two stereo “Y” splitters. Plug the single end of each “Y” splitter into the lightframe and headphone ports on your light and sound unit and your two lightframes and two headphones into the other ends of the “Y” splitters. Some systems, mainly the AA battery operated units, may show a slight loss of power when running two users during a session, but any loss would be minor. The bigger units should show no decrease whatsoever.

Second, rather than using headphones, use speakers. Computer speakers, amplified speakers or speakers that you can get for small CD players work great. Purchase speakers that has one speaker’s cord connected to the other, and that speaker having a cord that you would plug into the headphone port of your light and sound instrument. This will allow you to entrain a roomful of people simultaneously or just yourself. Do you need to go to sleep but do not want to wear headphones and lightframes? Nothing like waking up tangled in wires. Instead, just place your unit in a corner with the speakers attached, the volume *very* low, and be guided to sleep without having to deal with lightframe and headphone connections. It works, my customers have been using this method for years. Be it for studying, going to sleep, for audience entrainment, to name just three applications, utilizing speakers rather than headphones can be an effective method for achieving desired states of consciousness.

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Making a Decision . . .

To reiterate, purchase a system that meets *your* needs. And promise yourself that you will use your unit on a regular basis.

How do you choose a light and sound instrument? This was briefly discussed earlier and is a question many new customers ask. I have found the following helpful in determining which unit best meets your individual needs:

Most light and sound machines are of excellent quality, irrespective of price. Most come with a one year warranty. If all you are looking for in a light and sound instrument is achieving a calmer, more relaxed state of consciousness or improving your ability to focus, then a small, low-cost unit is all you need.

If you are considering a low-end unit, then later purchasing a more advanced system, spend a little more up front and save in the long run.

If you want the best light and sound instrument on the market, buy the PR-2X. TENcolor lightframes come as part of the standard system! If price is a factor, purchase the Sirius. White LED lightframes are included and the system retails for less than $150.

Whichever light and sound instrument you decide to purchase, at some point promise yourself you'll get TENcolor lightframes to go with it. If there is one accessory you should treat yourself to, TENcolors are it. If budget permits, go for the ALLcolor Visual System. You will experience color stimulation in the finest sense.

Be careful of expensive machines which promise a lot on paper, but do not deliver in actual services. Little things like offering software programs on pc disk but not on CD is one illustration. Responses to your questions from the manufacturer or dealer you are purchasing from are another.

And remember:

Regardless of price, all light and sound instruments contain built-in sessions that already target all four general brainwave states. Don't bother with the fancy titles many sessions go by as you check the unit's session list. Look for the frequencies targeted in the session. Session names can get confusing, knowing which frequency the session targets alleviates that problem.

If your hearing is very good, way better than what is considered average, or the quality of sound delivery is an important consideration for you, give the Mind Gear and Mind Alive models special attention. The PR-2X and Paradise XL possess excellent sound quality.

Probably the most noticeable difference between high-end and low-end systems is the quality of headphones. If you purchase a low-end unit, consider using better headphones than what comes with the unit. For audiophiles, consider buying high-end headphones.

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Your Light & Sound Instrument Has Arrived, Now What?

The very first thing you do . . .

Read the owner's manual that comes with your unit!

Chances are that you still 'won't get it' after finishing, but it is important to complete 'step one' before tackling step two: your personal review and walk-through. Spread out everything that came with your light and sound instrument in front of you. Have your owners manual turned to page one. Now repeat step one. Read, install the batteries, hook up the components, test the light intensity while the glasses are on the table before you, adjust the volume control, play with the buttons. Do not fear, it is difficult to scramble, confuse or totally destroy the inner-workings of a light and sound instrument just by pressing the buttons. If you happen to be one of those adventurous souls that do achieve such a feat, I have personally found that taking the batteries out, waiting a couple of minutes, then replacing them oftentimes works. If it doesn't, then here's reason #1 for buying your system from an experienced dealer!

If all this appears foolish and repetitive for just wanting to run a simple light and sound session, please consider: How much do you actually know about light and sound? How much did you pay for your light and sound system? How serious are you about maximizing your light and sound session experiences? All things considered, spending just 30-60 minutes familiarizing yourself with your new system is minimum effort, little to expect, yet very rewarding: having the confidence in knowing you are 'doing it right'.

Or for those of you who have yet to purchase a system, this is how you do it:

Step 1: Install the batteries. This is not a difficult task (although sometimes the little plastic battery cover can be a royal pain to slide off). Some manufacturers are considerate and include batteries or an AC adapter, some aren't. Many light and sound instruments use AA batteries, so buy an 8-pack. Have some for your unit and your CD or MP3 player. When installing, just make sure the "+" end of the battery lines up with the "+" end of the battery compartment and you'll be set. Expect each set of batteries to last for several sessions. For those with an internal battery, they usually arrive fully charged. Some may call for charging, usually an overnight inconvenience. Internal batteries should last a good five hours before recharging, which can be done with what should be included in your light and sound system: an AC adapter.

Step 2: Connect everything. The headphones and lightframes each have their own plugs. All you need to do is connect each component to their respective plug. You'll know right away if you have them backwards as you will hear a rather loud clicking noise with absolutely no audio frequency entrainment value whatsoever bellowing from the headphones when you turn on the power. Just switch them, and don't worry, you didn't 'harm' anything. And do not forget the stereo patch cord. This connects between the auxiliary plug of your unit to the headphone jack of your CD or MP3 player. Music, spoken word, classroom notes you've recorded in your own voice, they all can be played in combination with a light and sound session. They all can be a factor in maximizing your session experiences.

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Step 3: Turn on the power. You feel confident, determined to continue, because you are stressed and you really need a break. Press that button!

Step 4: Select a session. The big decision! In the beginning, keep it simple. What do you feel like? That's all you need to ask.

Are you stressed, need to relax? Do an alpha session. They are sessions with frequencies in the 8-12 Hz range and reflect a state that can be described as being relaxed, yet focused.

Are you really stressed? Need to relax big-time? Theta should help. Those are the sessions with frequencies in the 3-7 Hz range. I do not advise first time light and sound users to select a theta session as attaining that state has been known to open doors on issues that could be of the variety the user is not prepared for. Try choosing a longer alpha session instead.

Sleep deprived? A delta session could be your answer. These are sessions in the 0.5-2 Hz frequency range. If you plan on sleeping with your head at an odd angle, use the headphones and lightframes. But if you want comfort and a delta/sleep session, then buy yourself a pair of inexpensive computer speakers ($15). Connect them to the headphone port on your light and sound unit and set the volume at a low level (much like the volume of a ceiling fan or hum of a fluorescent light). Try this without the lightframes.

Do you feel just the opposite? Are you in need of being alert, energized? Go with beta. These sessions can range from 13-30 Hz.

Please note that these descriptions are in 'generic' terms for the sake of first time users. Everyone is affected differently by auditory and visual stimulation. If a particular session targeting a state you wish to achieve is found to be lacking, try the next session listed under that brainwave category. Find and use the sessions you enjoy. For an in-depth description of how others use their light and sound systems and for what purposes, download the ebook "Mind States / An Introduction to Light & Sound Technology", 2nd Edition, by Michael Landgraf. It is available at: www.mindmachines.com and is included free with your purchase of a light and sound system..

Step 5: Press play. You have made your decision. You've set the audio and light intensity levels just right: at a comfortable setting. No need to blast the stimulation as 'loudest and brightest' does not make it 'best'. You have given yourself the gift of relaxation. You understand how to use your light and sound system. Now it is time to enjoy it!

(Optional) Keeping a journal. Subtle changes can occur when using light and sound stimulation on a routine basis. Oftentimes the user is unaware of the changes while they are actually happening. The ebook "Mind States", which you receive free with your system from Mindmachines.com, includes a 30 Day Learning / Relaxation Program. Use it! By maintaining a daily record, you benefit by having the ability to review what you have previously written and are able to compare those feelings with what is happening to you now. Be aware of your personal growth, keep a journal.

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REFERENCES & SUGGESTED READING LIST

If you are on the Internet, visit www.mindmachines.com for free downloads of all issues of the AVS Journal. Published by Michael Landgraf Enterprises LLC, each issue is packed with information about light and sound technology. Also, should you have children or work with children who enjoy coloring, visit mindmachines.com and download Fossil Phil's "Light, Sound & Fun" coloring book. Created by Michael Landgraf., this free downloadable coloring book contains 49 pages for children to color, along with a story about using light and sound; written of course for children.

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About the Author

Michael Landgraf is the President of Michael Landgraf Enterprises LLC, Publisher and Editor of the AVS Journal, and author of "Mind States: An Introduction to Light & Sound Technology", which is now available in it's 2nd Edition (Fall, 2005).

Michael Landgraf is an associate member of the International Medical and Dental Hypnotherapy Association, is a consultant to OPNET, Inc. (developers of NeuroLearning), and is a consultant and dealer representative for Mind Gear Inc., one of the world's premier light and sound manufacturing companies. In addition, he has performed over 4.000 light and sound training sessions and 500 EEG/neurofeedback training sessions.

Michael Landgraf has also developed the 515 CD, the LoopLogic CD (for utilization with eeg / neurofeedback training), recorded Relajacion (for relaxation techniques in Spanish), and the Sounds of Mono Lake jointly with Christopher Oliver. Mr. Landgraf, in conjunction with Chris Williams, has also developed Lightframe Polarity Adapters, TENcolor Lightframes and the ALLcolor Visual System™.

Michael has over 20 years experience in personally utilizing light and sound instrumentation and for over fifteen years has been a retailer and distributor, offering light and sound technology, as well as dozens of other relaxation tools, with sales to customers worldwide (95 countries as of this writing). Over the years, he has carried InnerQuest, MindGear, Synetic Systems (Mindplace), and Comptronics (MindAlive) instruments.

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Since 1990, Michael Landgraf Enterprises LLC has sponsored learning / relaxation programs that utilize light and sound instrumentation. Some of the past, present and ongoing programs include:

-The Behavioral Science Services and Communications Divisions of the Los Angeles Police Department.

-The Parenting Institute of Los Angeles.

-The Braille Institute (Los Angeles region).

-Recovery Serenity Ranch, Saugus, CA.

-Danube Avenue Elementary School, L.A. Unified School District.

-Polygram / Mercury Records, Santa Monica, CA.

-AIDS Project / Los Angeles, Our House residential facility.

-The Acu-Detox Rehabilitation Program, Westlake Village.

-Rainbow Recovery Unlimited, Santa Clarita, CA.

Michael Landgraf offers private, individual instruction on how best to use light and sound instrumentation to meet the particular needs of his clients. Michael also is the owner and operator of several relaxation-oriented websites, including: Mindmachines.com, Mindaware.com, AVS-Journal.com and ToolsForRelaxation.com. For more information about Michael's approach to light and sound technology or to contact Michael directly, please visit any of these websites.

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